[COMMENTARY]

A CLOSER EVALUATION OF CURRENT METHODS IN PSYCHIATRIC ASSESSMENTS: A Challenge for the Biopsychosocial Model

by HAMID R. TAVAKOLI, MD

Chief, Consultation-Liaison Service, board certified by the American Board of Psychiatry and Neurology in the specialty of Psychiatry and subspecialty of Psychosomatic Medicine, and with the Psychiatry Department, Naval Medical Center, Portsmouth, Virginia.

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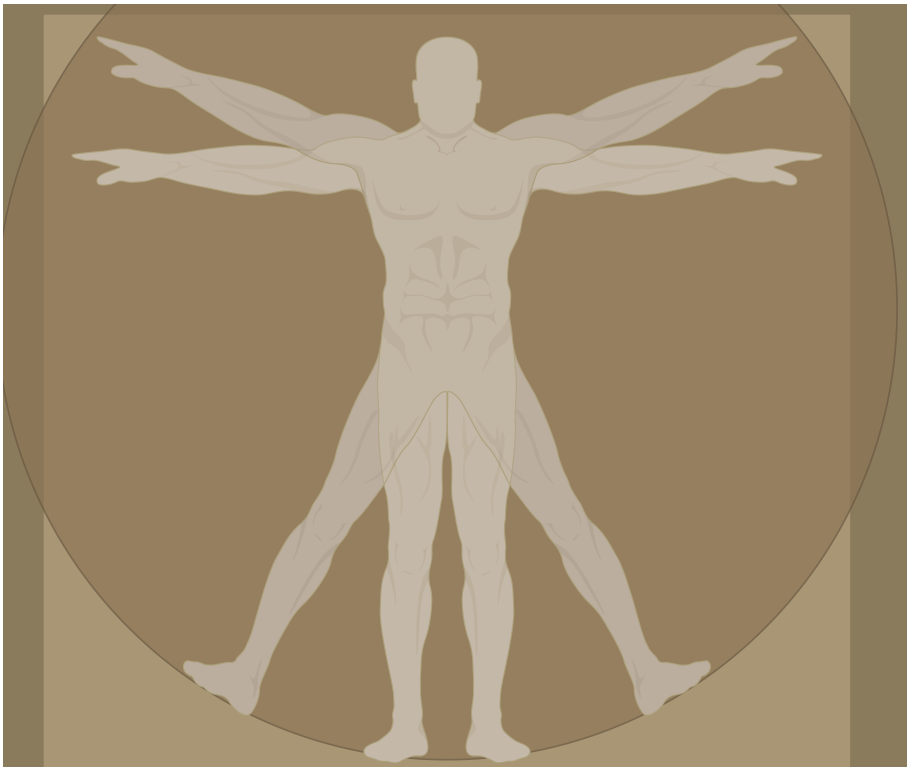
ABSTRACT

The biopsychosocial model, the current method in psychiatric assessments, is reviewed and critiqued. The history and original intents leading to the conception of the biopsychosocial model are briefly discussed. Five inherent problems with the use of the biopsychosocial model in psychiatric assessments and training programs are presented. Two alternative approaches are discussed and promoted for clinical, educational, and research practices in medicine.

INTRODUCTION

Presently, medical schools and psychiatry residency programs use the biopsychosocial model to train and teach medical students and residents. Both the American Psychiatric Association and the American Board for Psychiatry and Neurology endorse this approach.[1,2] The genesis of the biopsychosocial model can be credited to George Engel who, in 1977, wrote "The Need for a New Medical Model: A Challenge for Biomedicine."[3] Engel was a revered physician among his colleagues. He was an internist who completed psychoanalytic training at the Chicago Psychoanalytic



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ADDRESS CORRESPONDENCE TO: Hamid R. Tavakoli, MD, Psychiatry Department, Naval Medical Center Portsmouth, 620 John Paul Jones Circle, Portsmouth, Virginia 23708; Phone: (757) 953-5269; Fax: (757) 953-6907; E-mail: hamid.tavakoli@med.navy.mil

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Institute.[4] The concept was originally intended to encourage nonpsychiatric physicians to see patients as a whole, a counterpoint to the increasing focus on molecular biology in medical school education. It was to help conceptualize patients not just as organisms with diseases, but as individuals with complex behaviors and emotions that affect their physical ailments.[5,6]

The biopsychosocial concept became increasingly popular and then the standard for teaching as evidenced by widely used basic textbooks in medical schools, such as *Human Behavior* and *Clinical Psychiatry* by Stoudemire.[7,8]

The challenges we face in psychiatry are undoubtedly partly due to differential reimbursement for medication treatment versus psychotherapy; however, in my view, some of these challenges are due to how we approach our patients using the biopsychosocial model, and more importantly, due to the semantics and inherent problems brought by emphasis on this model.

Unfortunately the biopsychosocial model has been "relegated to political lip service" as stated by Gabbard and Kay in "The Fate of Integrated Treatment: Whatever Happened to the Biopsychosocial Psychiatrist?" published in the *American Journal of Psychiatry* in 2001.[9] The challenges we face in psychiatry are undoubtedly partly due to differential reimbursement for medication treatment versus psychotherapy; however, in my view, some of these challenges are due to how we approach our patients using the biopsychosocial model, and more importantly, due to the semantics and inherent problems brought by emphasis on this model. These inadequacies are exacerbating current troubles within psychiatry in that psychiatrists are often relegated to mainly "pushing pills" (biological) while other mental professionals do the "talk therapy" (psychological). Perhaps we are seeing the same developments in psychiatry as Engel saw in general medicine, when a more holistic approach to patients was lacking. Psychiatrists now are supposed to be purely doctors for brain disease and perform medication management with little to no psychotherapy, when in fact treating psychiatric patients involves far more than that.

Several publications to date have presented thoughtful critiques of the biopsychosocial model.[10,11] In this article, I will delineate five significant, inherent, and outstanding problems I see with the use of the biopsychosocial model in psychiatric case formulations. I will present two alternative approaches for psychiatric assessments.

THE PROBLEMS WITH THE BIOPSYCHOSOCIAL MODEL

The problem with further dichotomizing biology and psychology. Engel's original intent for development of the biopsychosocial model was to alleviate emphasis on "biomedicine" and to provide a more holistic approach to patients. Unfortunately, for most novel users attempting to learn and use the biopsychosocial model, the model may suggest that biology is separate from psychology. While trying to teach future psychiatrists about major depressive disorder, for example, how can we, as educators, delineate for them what is biological versus what is psychological? When the biopsychosocial model is recommended as a teaching model[12–16] in the halls of academic medicine, one can see the frustration in medical students or junior residents trying to categorize a patient's symptoms and clinical history suggestive of major depressive disorder into biological versus psychological.

The ambiguity of such distinctions highlights the weakness of this model for teaching and clinical purposes. Medical students and residents often have trouble trying to categorize conditions like bipolar disorder and schizophrenia, in the biological versus the psychological sphere, when such a separation is really arbitrary. Also, this can lead to the implication that perhaps such disorders of the brain can be controlled and manipulated by patients, which is clinically inaccurate and can lead to misguided treatments with potential for suboptimal outcomes. The argument here is not to imply that a psychological disorder is always volitional, whereas a biological disease is never the patient's fault, but to mention that any verbiage implying a separation between *biology* and *psychology* is misleading.

The problem with reinforcing the stigma associated with mental health. Engel thought that all medical illnesses should be seen in a biopsychosocial concept. He would not have thought that his concept could reinforce the stigma associated with mental health; however, albeit unintentional, the biopsychosocial concept, in hinting that biology is distinct from psychology, indirectly re-enforces the stigma that psychiatric diseases patient suffer from are volitional and not medical issues. This misconception for psychiatric disorders, which have strong evidence for a disease model, meaning a distinct pathophysiology, by no means helps us advocate for our patients and has negative implications in research and clinical practice. Some of these diseases, which have had enough scientific evidence for their known deviations from normal physiology and their pathogenesis, have been salvaged from the erroneous scrutiny and stigma given to psychiatric diseases. Examples are Alzheimer's, epilepsy, and schizophrenia (unbelievably,

schizophrenia is still debated by some, but thankfully they are a minority now). Other disorders have strong findings and presumptive evidence for a disease with an underlying pathophysiology. It is now widely accepted in the medical and scientific community that affective disorders like bipolar and major depressive disorders fit the disease model due to evidence suggesting heredity and neurophysiologic findings.[17,18] Muddying the waters further with terms like *macrocultural variable*[19] hinders progress in diagnosis, treatment, and research; disease states like schizophrenia and bipolar disorder have remarkably similar core symptoms in any corner of the world, regardless of race, color, or ethnicity.

The problem with implying that poor behavior is a disease and the impact on society at large. By definition, disorders with behavioral problems as the predominant feature do not have strong evidence for an underlying pathophysiology. Problems arise when behavioral disorders are categorized as biological with attempts to treat such conditions solely in a medical model. Just as when one can overlook a disease state (e.g., schizophrenia) and categorize it as a psychosocial phenomenon, one can turn and excuse poor behavior (e.g., antisocial behavior) as a disease with the notion that it can be treated in a medical setting. Examples of these behaviors are theft and violent acts, which are often attributed by the perpetrator to some mood or thought disorder. If such misconduct is attributed to a disease state, this will have significant negative impact on the image of psychiatry and the wellbeing of society in general.

Many examples of predominantly behavioral disorders exist in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (*DSM-IV*). However, some argue that these disorders are mainly biological problems. For example, they may point to the heritability of alcoholism and claim it as a disease process and attempt to control it by medications alone. Other examples include the hysterical behaviors of those who claim they have been abused and short-changed by society and they are backed by psychiatrists who have assigned them a list of disorders endorsing their victimized state. Later, it is discovered that they have a bad temperament and exaggerated response to any mild notion of threat, and the only ones being abused and short-changed are the rest of us in the community at large. Further examples of such socially constructed disorders, erroneously endorsed by some medical doctors in psychiatry, are multiple personality disorders, dissociative identity disorders, and recovered memory controversies of the early 1990s.[20]

The problem with the psychosocial paradigm and related terminology. Another problem with the biopsychosocial model is the elusive psychosocial paradigm and related terminology that cause further confusion. The term *psychosocial history* is used often in communication with residents, students, and nurses. The meaning of this term becomes obscure as it is difficult to make sense of what aspects of a patient's social history are not part of his or her psychological history. Moreover, categorizing and splitting a patient's social history further into his or her birthplace (geosocial), religious beliefs (religiosoical or spirituosocial), and financial situation (econosocial) becomes impractical.

During my tenure at Wilford Hall, I had an excellent nurse practitioner who worked with me on the consultation-liaison service. He was very interested in the cultural aspects of the patients on the service. He was adamant that he was onto something by adding another sphere to the biopsychosocial model circles and calling it the *biopsychosociocultural sphere*. One of my better and more vocal residents never gave up teasing my nurse practitioner by coming up with more spheres to add to the model. The final rendition was the biopsychosocioculturogeoethnicspiritual model! Ultimately, I believe psychosocial history is really the patient's background data and his or her life story, perhaps better categorized as simply social history.

The problem with teaching and communicating using a concept that is fundamentally weak. Another problem lies in difficulties in teaching this concept to medical students and residents, despite intensive efforts.[21–23] Inquisitive students hesitate to grasp the biopsychosocial concept readily, question its fundamentals, and soon realize the flimsiness of the concept. Since this model has become the basic foundation of psychiatry, it can turn eager medical students away from the field of psychiatry from the start.

A related problem is faced by our colleagues in other medical and surgical disciplines.[24,25] The biopsychosocial model actually antagonized what it was intended to do in the first place by helping physicians focus on patients' psychosocial backgrounds. What it actually does is discourage them from incorporating their patients' emotional states as part of their overall assessment due to the confusion that the concept causes for most physicians. They become frustrated, avoidant, and less effective in treating their patients with emotional issues. It may be more effective to simply teach our physician colleagues to make note of their patients' behavioral and emotional symptoms on the same problem list they are used to creating for their patients' general medical conditions.

In the past several years, while performing mainly outpatient care and being on the other side of the fence from the inpatient hospital environment, I have observed that the biopsychosocial model affects inpatient psychiatry and consult-liaison work very badly. The concept is often used improperly and without

much thought. It hampers communication and relationships with our medical colleagues when taking care of mutual patients.

On numerous occasions, I have received discharge summaries regarding the inpatient care of my patients that state "the biopsychosocial milieu was used to treat the patient," with no additional information. This treatment plan has little sense and less content. It does not offer anything specific or useful for a patient's care and coordination of it with his or her team of physicians.

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TWO ALTERNATIVE APPROACHES FOR PSYCHIATRIC ASSESSMENTS

Psychiatric assessments using an already established model in general medicine for "case formulations." Psychiatry, just like any other medical discipline, uses historical data, medical examination, and a variety of studies to reach an impression, diagnosis, and treatment plan for a patient. Why should this age-old approach to treating ailing patients be any different in the field of psychiatry? Why is there a need for "case formulation" rather than assessment based on data gathered through history of present illness, past illnesses, family and social history, review of systems, physical exam including mental status exam, information from collateral sources, laboratory data, radiological studies, and oftentimes, psychological testing?

A patient's chief complaint of "depression" can be triggered by the anniversary of a spouse's death or due to cocaine withdrawal—both causes can be gathered through careful history and exam and neither require antidepressants. But in another patient, the same chief complaint of depression may not be linked to any identifiable triggers or it may present itself with almost universally associated neurovegetative symptoms markedly affecting physical health. At the present, the scientific knowledge of more specific etiologies is lacking in order to use the same approach in general medicine in producing a sound differential diagnosis for the patient's clinical state of depression; however, with proper direction in psychiatric assessments and further advances in research, one day we will be able to state with more confidence if a patient's depression is due to an autoimmune process versus a viral infection versus a collagen vascular disease.

In this approach, the inclination to treat psychiatry differently from its sister disciplines is questioned. The mind-brain argument becomes arbitrary for the sake of practical approaches to patients, and it maybe better suited for philosophical and existential discussions. Perhaps the mind-brain dilemma is not a good reason to complicate psychiatric assessments by implementing convoluted and novel ideas for the sake of "formulating a case." It is best kept simple and to the standard used in any other discipline in medicine. Although, if a framework is indeed necessary to help habituate future psychiatrists in making coherent assessments of their patients, the perspectives model maybe a better alternative to the biopsychosocial model.

Psychiatric assessments using the perspectives model. In 1986, McHugh and Slavney wrote *The Perspectives of Psychiatry*,[26] with a second edition of the book being published in 1998.[27] This book proposes a framework to tackle the dilemma, conceivably more unique to psychiatry than other medical disciplines: the mind-brain problem. This dichotomy is ultimately the reason why many refer to psychiatric assessments as "case formulation," therefore, much debate follows in how we summarize our patients' histories and exams in order to be directed toward appropriate treatment options.

The perspectives model proposes four areas to be assessed by the psychiatrist. A thorough review of the perspectives model is outside the scope of this article; however, in the following each perspective is briefly explained.

The disease perspective: what a patient has. In every patient we evaluate, we are searching for a disease. This should be our first task, to decipher what is the pathology underlying a patient's ailment. This category includes patients with Alzheimer's, schizophrenia, and bipolar disorder, i.e., patients who have structural or functional pathologies affecting their brains.[28]

The dimensional perspective: what a patient is. Some patients deviate to some extreme of psychometrically measurable dimensions like temperament and intellect.[29] Gathering data about these dimensions through direct questioning, in-depth psychological testing, and information from collateral sources is essential to a comprehensive psychiatric evaluation. It is difficult to categorize a patient's innately intense affect and introversion in the biopsychosocial model: Are these traits biological because they are innate or psychological because they are features of one's mental concept?

The behavioral perspective: what a patient does. The behavioral perspective looks at the goal-directed, goal-driven features of human life. Some behaviors depend not on a physical drive but on a combination of psychiatric vulnerability and social learning, which then becomes fixed and warped, e.g., alcoholism, drug

addiction, hysteria, suicide, sexual paraphilia, and eating disorders.

McHugh[28] explains, "What these individuals 'have' and what they 'are' may enhance their vulnerability to the behavior, either by triggering or sustaining it, but primarily their conditions are tied etiophathically to what they choose, how they responded to that choice, and why, for them, such choices led to a driven habit."

The life story perspective: what a patient encounters. To understand a person's life story and the meaning he or she assigns to events in his or her life is essential in psychiatry.[29] Sometimes just the act of listening and the intent to understand our patients in and of itself is therapeutic enough to relieve whatever symptoms or grief are ailing them.[30] This interest in learning the life stories of patients promotes a deeper appreciation for our patients, regardless of the diseases with which they are affected, the innate temperaments with which they are bestowed, and the behavioral choices and tendencies they have demonstrated in different situations; despite it all, they have encountered a unique set of circumstances.

Something essential is lost in the current practice of split treatments and supposed regulation of costs. To decipher someone's life story is much more fruitful than an attempt to fill in the boxes for one's psychosocial history, or worse, to merely complete a checklist of symptoms in the DSM-IV to meet criteria for a diagnosis. Not only is the sense of gratification for getting to know your patients lost, but also the effectiveness in diagnosis, and thus treatment of that patient is hampered. Especially in psychiatry, so much of the data gathered during the interview are dependent on the interaction alone. Whenever that time is made briefer, the density and value of the data gathered is less and therefore weaker. It is a setback in psychiatry when residents can only speak of patients in "meeting criteria" for a disorder.[31] It is paramount to our discipline that we get to know our patients, allow them to tell us their life stories, to guide them, and give them a chance to re-tell their histories in order to gain insight for a better future.

The following example is to illustrate how the perspectives model is used in a clinical scenario: A 32-year-old man had schizophrenia (disease), was unsociable and frequently aggressive, and psychological testing revealed an IQ of 81 (dimension). He resorted to drinking excessive alcohol and smoking marijuana (behavior). He came from an impoverished background, raised in an urban area with a family in a low economic class, and while growing up he was repeatedly beaten by his abusive father (life story).

In this example, this patient's schizophrenia and poor coping by using alcohol and marijuana may be the more pressing and urgent issues to treat, but all aspects of the perspective approach are important to note when addressing this patient's needs.

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CONCLUSION

The genesis of the biopsychosocial model was to help us better assess our patients and to remind our colleagues about their patients' other aspects of life besides their biology. During several decades of popularity, it has morphed into the standard of how psychiatrists assess patients and how they are examined for board certification. This model is used to communicate with our physician colleagues, ancillary staff, and even society at large. Somehow the biopsychosocial approach became hard science with presumed clinical efficacy in patient management. Any deviation from or challenge to it will call for questioning of one's competence. Confronting the strength of this concept has caused concern and at times outrage, as if it is improper to promote a different way of thinking about our patients. I hope that with this article I have been able to highlight some of the concept's weaknesses.

The biopsychosocial model, however unintentionally, promotes an artificial distinction between biology and psychology, and this does not help our cause in trying to destigmatize mental health. Let us not make arbitrary distinctions between organic and nonorganic. We are ultimately organic. The perspectives model does not make that arbitrary distinction. We are biological beings—some are afflicted with diseases, born with innate temperament and style along with different intellectual features. We have choices in how we behave and have each faced a unique set of circumstances in life—each with a distinct life story.

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REFERENCES

1. Psychiatry Part II examination format, Patient Section. Buffalo Grove, IL: The American Board of Psychiatry and Neurology, Inc., 2008.
2. McDermott JF, Sterilizer J, Lump KY, et al. Pilot study of explicit grading criteria in the American Board of psychiatry and Neurology

Part II examination. *Am J Psychiatry.* 1996;153:1097–1099.
3. Engel GL. The need for a new medical model: a challenge for biomedicine. *Science.* 1977;196:129–136.
4. Engel PA. In memoriam George L. Engel, MD, 1913–1999: remembering his life and work, rediscovering his soul. *Psychosomatics.* 2001;42:94–99.
5. Engle GL. A unified concept of health and disease. *Perspect Biol Med.* 1960;3:459–485.
6. Engel GL. From biomedical to biopsychosocial: being scientific in the human domain. *Psychosomatics.* 1997;38:521–528.
7. Stoudemire A. *Clinical Psychiatry for Medical Students.* Philadelphia, PA: Lippincott, Williams, and Wilkins, 1998.
8. Stoudemire A. Human Behavior: *An Introduction for Medical Students, Third Edition.* Philadelphia, PA: Lippincott, Williams, and Wilkins, 2004.
9. Gabbard GO, Kay J. The fate of integrated treatment: Whatever happened to the biopsychosocial psychiatrist? *Am J Psychiatry.* 2001;12:1956–1963.
10. McLaren N. A critical review of the biopsychosocial model. *Aust N Z J Psychiatry.* 1998;32:86–92.
11. Molina JA. Understanding the biopsychosocial model. *Int J Psychiatry Med.* 1983;13:29–36.
12. Engel GL. The biopsychosocial model and the education of the health professionals. *Am NY Acad Sci.* 1978;310:169–187.
13. Roenbum S, Frankel BL. Teaching the biopsychosocial model to medical residents in an outpatient clinic. *Psychosomatics.* 1984;25:751–759.
14. Sperry L. Teaching the biopsychosocial perspective: a comparison of two approaches. *Psychol Rep.* 1991;68:99–102.
15. McDougall GM, Reade B. Teaching biopsychosocial integration and formulation. *Can J Psychiatry.* 1993;38:1359–1362.
16. Smith RC, Marshall AA, Cohen-Cole SA. The efficacy of intensive biopsychosocial teaching programs for residents: a review of the literature and guidelines for teaching. *J Gen Intern Med.* 1994;9:390–396.
17. Stahl SM. *Stahl's Essential Psychopharmacology, Neuroscientific Basis and Practical Applications, Third Edition.* Cambridge: Cambridge University Press, 2008:453–510.
18. Levenson JL. *Textbook of Psychosomatic Medicine.* Washington (DC): American Psychiatric Publishing Inc., 2005:193–217.
19. Suls J, Rothman A. Evolution of the biopsychosocial model: prospects and challenges for health psychology. *Health Psychol* 2004;23(2):119–125.
20. McHugh PR: *The Mind has Mountains. Reflections on Society and Psychiatry.* Baltimore, MD: JHU Press, 2006.
21. McClain T, O'Sullivan PS, Clardy JA. The biopsychosocial formulation: recognizing educational shortcomings. *Acad Psychiatry.* 2004;28:88–94.
22. Milan FB, Goldstein MG, Novack DH, O'Brien MK. Are medical schools neglecting clinical skills? A survey of US medical schools. *Ann Behav Sci Med Educ.* 1998;5:3–12.
23. Schmidt H. Integrating the teaching of basic sciences, clinical sciences, and biopsychosocial issues. *Acad Med.* 1998;73(9 suppl):S24–31.
24. Herman J. The need for a transitional model: a challenge for biopsychosocial medicine? *Fam Sys Health.* 2005;23(4):372–376.
25. Walstein SR, Neumann SA, Drossman DA, Novack DH. Teaching psychosomatic (biopsychosocial) medicine in United States medical schools: survey findings. *Psychosomat Med.* 2001;63:335–343.
26. McHugh PR, Slavney PR. *The Perspectives of Psychiatry.* Baltimore, MD: JHU Press, 1986.
27. McHugh PR, Slavney PR. *The Perspectives of Psychiatry, Second Edition.* Baltimore, MD: JHU Press, 1998.
28. McHugh PR. Striving for coherence, psychiatry's efforts for over classification. *JAMA.* 2005;293:2526–2528.
29. Wise TN. Consultation-liaison research: the use of differing perspectives. *Psychother Psychosom.* 1995;63:9-21.
30. Anthony JC, Folstein M, RomanoskiAJ, et al. Comparison of the lay diagnostic interview schedule and a standardized psychiatric diagnosis. *Arch Gen Psychiatry.* 1985;42:667–675.
31. Treisman GJ. The DSM: has the tail begun wagging the dog? *Am Psychiatry News.* 2008;1(6):1–7.